PATENT

Atty Docket No.: 200208212-1
App. Ser. No.: 10/608,151

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks. Claims 1-3, 5-35 and 37-46 are pending in the present application of which claims 1, 15, 29, 32, 35 and 40 are independent.

Claims 1-46 were subjected to a restriction requirement, and claims 2-3, 8, 14, 16-19, 20, 23-24, 37, and 39 are further subject to an election of species requirement.

Claims 1, 2, 4-14 and 35-39 were examined and the remaining claims were withdrawn from consideration by the Examiner.

Claims 1, 2, 4-6, 8-11, 14 and 35-39 were rejected under 35 U.S.C. §102(a) as being anticipated by Chaiken et al. (2002/0183869), referred to as Chaiken.

Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Chaiken in view of Davidson (6,946,363).

Claims 12-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chaiken in view of Bradshaw (4,386,733).

Examiner Interview Conducted

The Applicants wish to thank Examiner Chen for granting the personal interview conducted on November 30, 2006, with the Applicants' representative, Ashok Mannava. The cooling system being designed for the nominal heat dissipation of the computer systems rather than the maximum heat dissipation was discussed. The nominal heat dissipation is less than the maximum heat dissipation, and in one embodiment the nominal heat dissipation is based on the average heat dissipation of the computer systems. Chaiken does not disclose a cooling system designed for the nominal heat dissipation of the computer systems.

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Also discussed was that the threshold is based on the cooling capacity for the cooling system designed for the nominal heat dissipation, and that an aggregate of measured temperatures for the computer systems may be compared to the threshold. Chaiken does not disclose these features.

Also, Davidson, which was used to reject claim 7, was discussed. Davidson discloses a diamond slab for a heat exchanger but does not disclose a cooling system distributing cooling fluid. Independent claims 1 and 35 have been amended to include distributing cooling fluid to distinguish over Davidson.

Drawing Objections

The drawings were objected to as not showing every feature of the invention specified in the claims. In particular, the objection states:

> Therefore, the "maximum cooling capacity of the cooling system is based on a nominal heat dissipation of the computer system, the nominal heat dissipation being less than a maximum heat dissipation of the computer systems"; "maximum cooling capacity of the cooling system is based on an aggregate of the nominal heat dissipation of each of the computer systems"; "nominal heat dissipation is based on an average heat dissipation of the electrical components"; and "an amount of cooling fluid distributed to at least one of the computer systems is substantially proportional to an amount of heat being dissipated by the at least one of the computer systems" must be shown or the feature(s) canceled from the claim(s).

The drawing objection was discussed during the interview. Applicant's representative indicated that these are all features of the cooling system shown in figure 1, and thus the features are believed to be shown in the figures. Examiner Chen agreed.

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Claim Rejection Under 35 U.S.C. §102

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

> Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

Claims 1, 2, 4-6, 8-11, 14 and 35-39 were rejected under 35 U.S.C. §102(a) as being anticipated by Chaiken.

Independent claim 1 has been amended to recite:

> cooling components distributing cooling fluid to the computer systems;
>
> at least one circuit operable to compare an aggregate amount of heat being dissipated by the computer systems to a threshold associated with a maximum cooling capacity of the cooling system, wherein the cooling system is designed to cool the computer systems based on a nominal heat dissipation of the computer systems, and the nominal heat dissipation is less than a maximum heat dissipation of the computer systems ...

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As discussed in the interview, Chaiken fails to teach a cooling system designed for nominal heat dissipation. The rejection relied on paragraph 0031 of Chaiken to teach this feature. Paragraph 0031 states:

> A cable company does not want to have a low number of subscribers and yet have to meet high air conditioning and power requirements initially because the number of subscribers does not justify the excess (and idle) cooling and power capacity. The invention makes it possible to install a computer system that is engineered for the maximum number of subscribers.

This paragraph may simply mean that a computer with a smaller capacity may initially be installed when the number of subscribers is low. When the number of subscribers is increased, a new computer may be installed with greater capacity and tested in the environment, and then the new air-conditioning system may be installed to accommodate the new computer system. See paragraph 0029. The air conditioning described in paragraph 0031 may be designed for the maximum heat dissipation of the computer systems rather than the nominal heat dissipation in each case. Nothing discloses or suggests the air conditioning is designed for nominal heat dissipation.

Thus, there is no disclosure in Chaiken that teaches a cooling system designed based on a nominal heat dissipation of the computer systems, where the nominal heat dissipation is less than a maximum heat dissipation or where the nominal heat dissipation is based on an average heat dissipation of the computer systems (see claims 1, 7 and 35).

Claim 1 has also been amended to describe an aggregate amount of heat for the computer systems compared to a threshold for the maximum cooling capacity of the cooling system. Chaiken fails to teach these features. Chaiken discloses a temperature for each component being compared to an operating range for each component. See paragraphs 0004

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and 0009. The threshold in Chaiken is not associated with a maximum cooling capacity of a cooling system designed for nominal heat dissipation. Also, there is no aggregate temperature comparison to a threshold in Chaiken.

Claim 1 has also been amended to describe cooling fluid to overcome the diamond slab heat exchanger of Davidson, as discussed during the interview.

For at least these reasons claim 1 is believed to be allowable. Independent claim 35 has been amended to recite similar features and is also believed to be allowable.

The claims dependent on independent claims 1 or 35 are believed to be allowable at least for the same reasons. Furthermore, claim 7 recites nominal heat dissipation based on average heat dissipation not taught by Chaiken. Claims 8 and 9 and claims 37-39 describe distributing cooling fluid as a function of heat dissipation not taught by the prior art of record.

Claim Rejections Under 35 U.S.C. §103(a)

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

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Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Chaiken in view of Davidson (6,946,363). Claims 12-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chaiken in view of Bradshaw (4,386,733). Claims 7 and 12-13 are believed to be allowable at least for the reasons claim 1 is believed to be allowable.

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Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: November 30, 2006 By

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